



# SEISMIC RESPONSE OF MECHANICALLY STABILIZED EARTH (MSE) BRIDGE ABUTMENTS

By: **Dr. John McCartney, Ph.D., P.E.**

**Associate Professor, UCSD**

**Thursday, November 3, 2016**

DINNER



The ASCE Orange County Geo-Institute invites you to join us for a presentation by Dr. John McCartney, Associate Professor, Department of Structural Engineering, University of California San Diego (UCSD).

The topic of Dr. McCartney's presentation will be MSE abutments, which have been used in many locations throughout the country because of their advantages over traditional bridge abutments. However, their seismic response and the interaction between the bridge deck and the MSE abutment in particular are not well understood, which have limited their use in some states. Dr. McCartney will present preliminary results from a combined numerical and experimental study on the seismic performance of a ½ scale MSE bridge abutment at UCSD. The backfill was a well-graded sand, prepared to a relative density of approximately 75% using a vibratory plate compactor. Uniaxial geogrid reinforcement were placed in both longitudinal and transverse directions at a vertical spacing of 0.15 m. The bridge deck was placed on the GRS abutment at one end and supported at the other end by a concrete wall resting on a sliding platform off the shake table. The bridge system was excited by several earthquake motions in the longitudinal direction, and the facing displacements, geogrid strains, and bridge footing settlement were measured. Comparisons between different tests with different configurations and reinforcement configurations will also be presented.

We look forward to seeing you at this event. Thanks, in advance, for your support.

## EVENT DETAILS

### DATE AND TIME

**Thursday, November 3, 2016**  
6:00pm to 9:00pm

### LOCATION

**UCI University Club**  
801 East Peltason Drive  
Irvine, California 92697  
(Free Parking)

### PRICE

ASCE Member: \$45  
(before October 28, 2016)  
ASCE Member: \$50  
(after October 28, 2016)  
Non-ASCE Member: \$5 extra  
Public Sector: \$15  
Student: \$15  
(Event price includes plated dinner)

### RESERVATION CONTACT

Mr. Clint Isa, PE  
GeoInstitute Chair  
[clint@diaryourman.com](mailto:clint@diaryourman.com)

*Space limited to first 70 attendees. Register today!*

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